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Reducing Noise Impact from High Volume Air Samplers, W. Van Winkle, J. W. Crowder, and G. J. Putnicki, No. 4, p. 17. *High volume air samplers (hi-vols) operating in noise sensitive areas can be the source of complaints from the public. By combining the measured sound pressure level (SPL) from a hi-vol with the background SPL at the prospective site, the noise impact at any distance from the operating hi-vol can be accurately predicted.*

The OSHA Noise Standard—An Update, E. N. Angevine, No. 5, p. 36. *Highlights of the 101 page OSHA amendment to the workplace noise standard, effective August 22, 1981; outlines requirements for a hearing conservation program to be instituted by employers and extending the standard to noise levels below 90 dbA.*

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An Effective Combined Environment Test Facility, A. Deitch, No. 4, p. 15. *Describes the design and fabrication of a test facility at the Re-entry Systems Division of the General Electric Company to provide specified temperatures combined with humidity, altitude, and vibration for missile component testing.*

An Approach to Thermal-Vacuum Test Optimization, R. Kruger, No. 4, p. 21. *An analytical model simulates failure rate characteristics of spacecraft equipment progressing through component and system level thermal-vacuum test programs and into orbit. Test programs as well as mission costs are part of the model. A "Lost Value" function combines the performance of the equipment with these costs and allows comparisons to be made among various test combinations and the resulting predicted mission performance. A minimum overall cost program is obtained by selecting that test program that yields the lowest Lost Value figure.*

Environmental Conditions for Shipboard Hardware, R. H. Chalmers, No. 5, p. 13. *Provides environmental profiles for use in laboratory reliability testing in which variations of temperature, humidity, shock, and vibration are linked to environmental conditions which would be encountered on a typical Navy ship on a typical Navy mission.*

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Proposed Recommendation Practices in Applying Broadband Vibration Screening of Electronic Hardware, W. Silver II, No. 1, p. 9. *Developed to guide the application of broadband vibration screening to a broad range of conventionally designed hardware, this Proposed Recommended Practice is a product of the Institute of Environmental Sciences' Shock and Vibration Working Group.*

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The USAF Armament Division Structural Dynamics Lab, W. O. Dreadin, No. 2, p. 45. *Describes the Air Force Armament Laboratory's (AFATL) Structural Dynamics Laboratory at Eglin AFB including load path verification, non-destructive load limits, and modal tests and analyses.*

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Preliminary Environmental Assessment for the Satellite Power System (SPS), No. 1, p. 16. *Excerpt from a Department of Energy study discusses the possibility of collecting solar energy in space, converting it to microwave energy, transmitting a microwave beam to earth, and then converting the microwave power to electricity. Includes evaluations of the system's health, safety, and ecological impacts; economic, international, and institutional issues; and comparative assessments of the SPS and alternative future power sources.*

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HEPA Filters as a Contamination Source, C. M. Davis, et al, No. 2, p. 27. *The source of particulate contamination found on semiconductor products in a Class 50 environment was found to be the high-efficiency particulate absolute (HEPA) filters used in the air system at IBM Burlington. Discusses the methods of detection and the difficulty in using air-monitoring techniques to flag the occurrence of HEPA filter contamination.*

Federal Standard 209—An Effective Clean Room Standard? R. C. Marsh, No. 2, p. 38. *Reviews the development and philosophy of FED-STD-209. Highlights accomplishments and deficiencies for the standard and sets forth recommendations for its improvement.*

Calibration and Operating Standards for Particle Counters, L. D. Carver, No. 4, p. 27. *Deals with the most common types of automatic particle counters which pass fluid through the instrument so that each particle is observed, measured, and counted individually. Reviews several standard methods for the calibration of particle counters.*

Environmental Effect and Contamination Control in the Manufacture of Photomasks for Use in the Semiconductor Industry, D. L. Angel, P. H. Johnson, and S. M. Ashkenaz, No. 5, p. 33. *Discusses the effect of contamination caused by human operator involvement, airborne and liquidborne particulates and environmental conditions such as smog on the quality of chrome photomasks. Offers observations, causes, and solutions to the problem.*

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Kinetics and Stoichiometry of Respiration in Biological Treatment Process, K. L. Wang, J. Bergenthal and Mu Hao Wang, No. 1, p. 30. *Reviews, assesses and further explores mechanisms and development of biological nitrification-denitrification. Places special emphasis on the endogenous oxygen respiration and the endogenous nitrate respiration (endogenous denitrification) of activated sludge.*

Nitrogen Transformations in Streams, J. Y. C. Huang and D. J. Wozniak, No. 2, p. 41. *Analyzes the transformation of nitrogenous compounds in a stream, based on physical, chemical, and biological characteristics of the stream. Discusses processes including nitrification; oxidation of organic nitrogen; nitrate reduction; the sediment adsorption and equilibrium process; aquatic plant uptake; conversion to organic nitrogen for cell synthesis; denitrification; and the respiratory reduction and assimilation processes of aquatic plants. Considers aerobic and anaerobic processes.*

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An Aerosol Tunnel Test Facility, E. R. Pejack, No. 3, p. 27. *Describes an open-circuit aerosol wind tunnel with heating and humidity control for testing particulate control devices. Facility supplies air flows up to 100 m^3 per minute and has an air jet particle dispersion device providing particle loadings with fly ash up to about 10 g/m^3.*

Reducing Noise Impact from High Volume Air Samplers, W. Van Winkle, J. W. Crowder, and G. T. Putnicki, No. 4, p. 17. *High volume air samplers (hi-vols) operating in noise sensitive areas can be the source of complaints from the public. By combining the measured sound pressure level (SPL) from a hi-vol with the background SPL at the prospective site, the noise impact at any distance from the operating hi-vol can be accurately predicted.*

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